

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
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V6

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/303,216	04/30/99	KIM	J VPI97-101-CI

JAMES F HALEY JR ESO  
FISH & NEAVE  
1251 AVENUE OF THE AMERICAS  
NEW YORK NY 10020-1104

HM22/0821

EXAMINER

OGIHARA, N

ART UNIT	PAPER NUMBER
1631	7

DATE MAILED:

08/21/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/303,216	KIM ET AL.	
	Examiner Nancy Ogiara	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claims 1-24 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - a) All b) Some \* c) None of the CERTIFIED copies of the priority documents have been:
    1. received.
    2. received in Application No. (Series Code / Serial Number) \_\_\_\_\_.
    3. received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

#### Attachment(s)

- |   |  |
|---|--|
| 15) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-6, drawn to a composition and crystal of HCV NS3 helicase protein and an oligonucleotide and methods of preparing the crystal, classified in class 530, subclass 350.
- II. Claims 7-11, drawn to a computer for producing a three-dimensional representation of a molecule or complex, classified in class 345, subclass 501.
- III. Claims 12 and 13, drawn to a computer for determining the structure of a molecule or complex from X-ray diffraction data, classified in class 702, subclass 27.
- IV. Claims 14-23, drawn to a method for evaluating the potential of a chemical entity to associate with a molecule or complex of NS3 helicase, classified in class 514, subclass 1.
- V. Claims 24, drawn to a method of using the structural coordinates in structure determination, classified in class 702, subclass 27.

The inventions are distinct, each from the other because of the following reasons:

Groups I (claims 1-6) and (II and III) (claims 7-13) are unrelated as Groups II and III are drawn to computers, whereas Group I is drawn to a biochemical composition and use thereof. As such the Inventions would require searching in separate and non-overlapping areas, imposing an undue search burden upon the examiner if not restricted.

Groups I (claims 1-6) and IV (claims 14-23) are separate and distinct as Group I is drawn to a biochemical composition and uses thereof, whereas Group IV is drawn to computational methods of modeling. Group IV requires computers and computer algorithms involving differing method steps and parameters not required or encompassed by the composition of Group I. As such the Inventions would require searching in separate and non-overlapping areas, imposing an undue search burden upon the examiner if not restricted.

Groups I (claims 1-6) and V (claims 24) are separate and distinct as Group I is drawn to a biochemical composition and uses thereof, whereas Group V encompasses X-ray diffraction and computational methods for structure determination of a molecule or complex unrelated to the composition of Group I. The methods of Group V do not require or encompass the compositions of Group I. As such the Inventions would require searching in separate and non-overlapping areas, imposing an undue search burden upon the examiner if not restricted.

Groups II (claims 7-11) and III (claims 12 and 13) are separate and distinct as each Group is drawn to differing computers containing differing computational algorithms and applications, requiring differing input parameters, and used to differing ends. The computer of Group III is used for structure determination using X-ray diffraction data, whereas the computer of Group II is for three-dimensional structure representation. As such the Inventions would require searching in separate and non-overlapping areas, imposing an undue search burden upon the examiner if not restricted.

Groups IV (claims 14-23) and V (claim 24) are separate and distinct as each method comprises differing steps using differing materials and parameters, to differing ends. Group V requires X-ray diffraction methods and structure determination which are not encompassed by the modeling of binding compounds of Group IV. As such the Inventions would require searching in separate and non-overlapping areas, imposing an undue search burden upon the examiner if not restricted.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nancy Ogihara whose telephone number is (703) 308-9363. The examiner can be reached

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Monday-Friday from 8:30-6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Michael Woodward can be reached at (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist, whose telephone number is (703) 308-0196.

Papers related to this application may be submitted to Group 1631 by facsimile transmission. Papers should be faxed to Group 1631 via the PTO Fax Center located in Crystal Park I. The faxing of such papers must conform with the notice published in the Official Gazette 1096 OG 30 (November 15, 1989). The CMI Fax Center number is (703) 308-4242.

Nancy Ogihara  
July 31, 2000

*Ardin H. Marschel*  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER